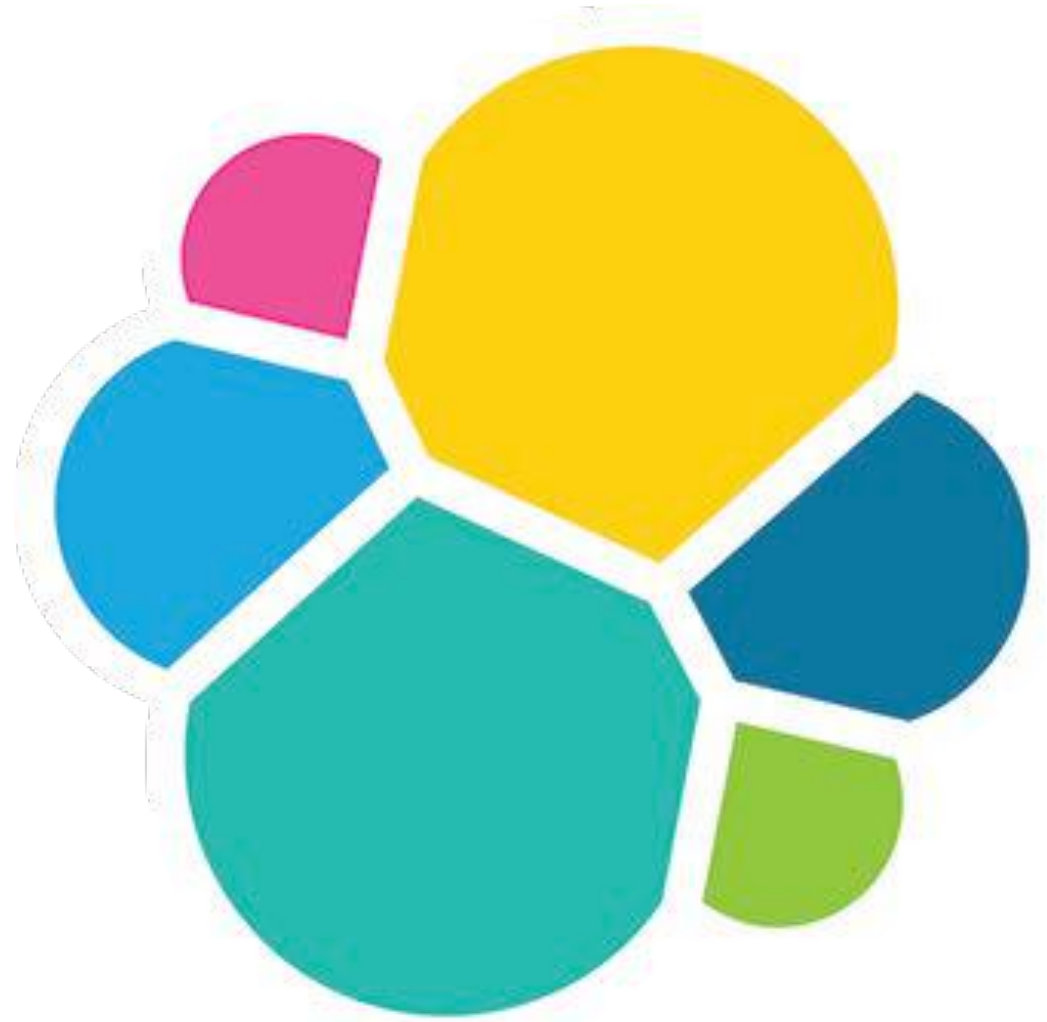


Se7en Deployment Sins

Philipp Krenn

@xeraa



elastic

Developer Advocate

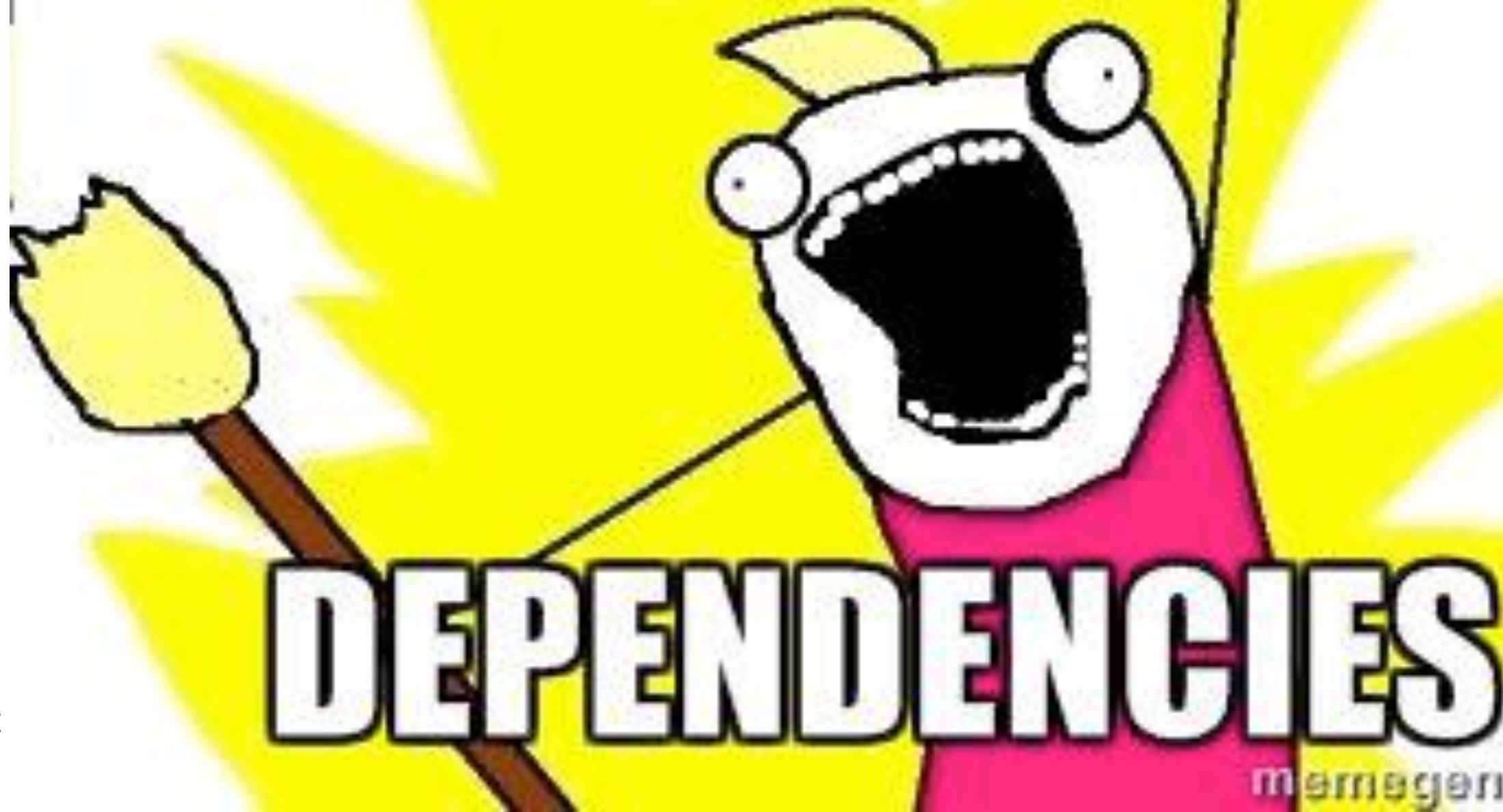




Gluttony

is the overindulgence and overconsumption of anything to the point of waste.

ADD ALL THE



DEPENDENCIES

Memory

PermGen Space / Metaspace

JAR / WAR


Disk and network

Diet

aws-java-sdk-1.8.12.jar 12.9 M
aws-java-sdk-1.11.335.jar 3.4 K

people arguing against fat JARs (only ship the business logic), but perfectly fine with containers – shipping even the JVM 🤔 #RigaDevDays

— <https://twitter.com/xeraa/status/864122131768119296>



640K ought to be enough for
anybody

emoji--1 - **v1.2.1** - returns the -1 emoji

emoji-100 - **v1.2.1** - returns the 100 emoji

emoji-1234 - **v1.2.1** - returns the 1234 emoji

emoji-8ball - **v1.2.1** - returns the 8ball emoji

emoji-a - **v1.2.1** - returns the a emoji

emoji-ab - **v1.2.1** - returns the ab emoji

emoji-abc - **v1.2.1** - returns the abc emoji

emoji-abcd - **v1.2.1** - returns the abcd emoji

emoji-accept - **v1.2.1** - returns the accept emoji

emoji-admission-tickets - **v1.2.1** - returns the admission-tickets emoji

emoji-aerial-tramway - **v1.2.1** - returns the aerial-tramway emoji

emoji-airplane - **v1.2.1** - returns the airplane emoji

emoji-airplane-arriving - **v1.2.1** - returns the airplane-arriving emoji

emoji-airplane-departure - **v1.2.1** - returns the airplane-departure emoji

COMBINE ALL



THE PROJECTS

WHEN YOUR BOSS TELLS YOU



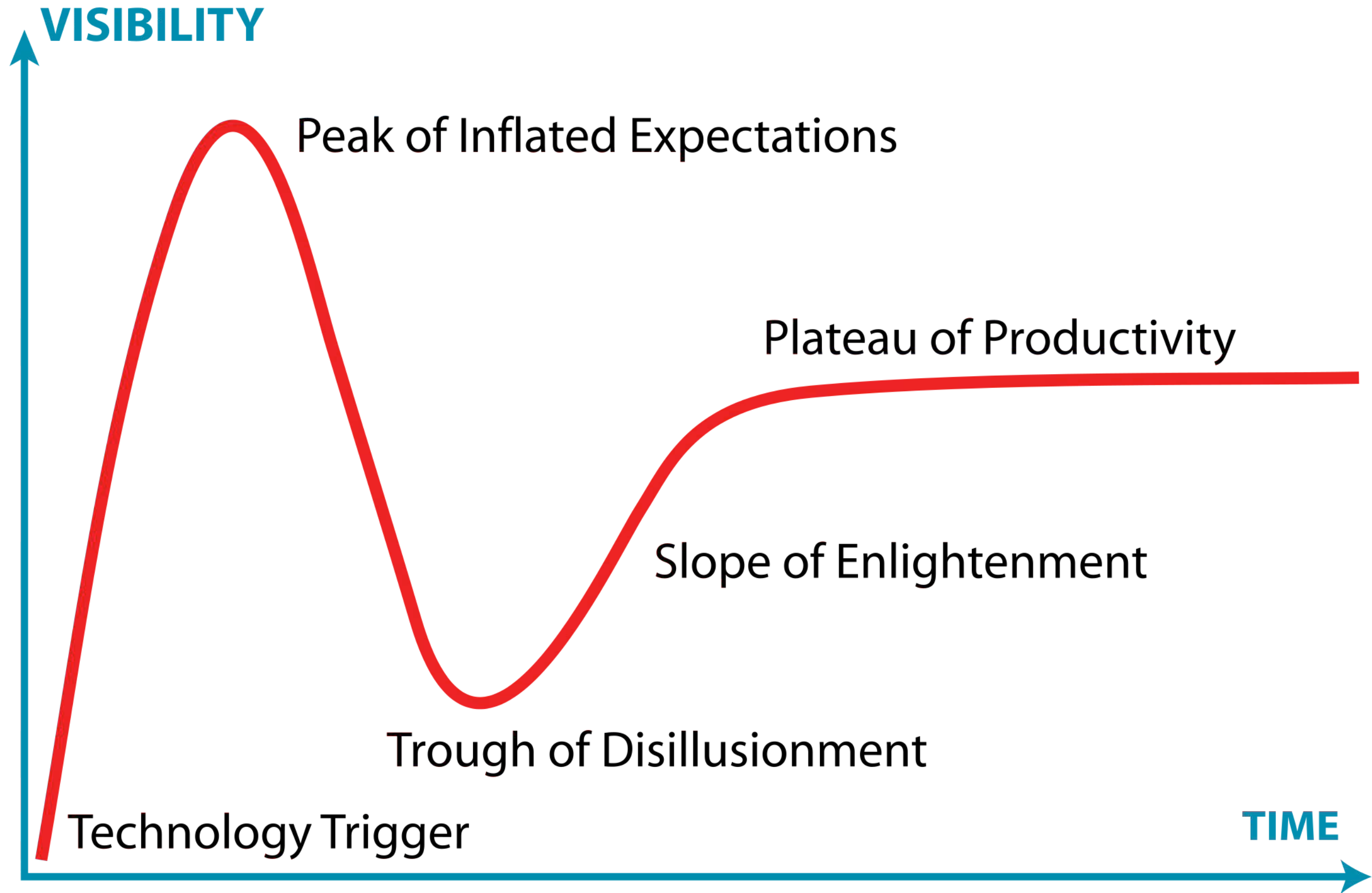
**WE'RE CONVERTING TO
MICROSERVICES**

IF ALL YOUR APIS HAVE SHORT NAMES,

THEN YOU HAVE MICROSERVICES

Microservices

Nano, Pico, Femto, Atto, **Yocto**



Don't forget – having legacy software is often a sign of success. Your business was successful to last long enough for your software to become legacy.

— <https://twitter.com/samnewman/status/929622273065136130>

Yes, it helps if
too many people
too many dependencies
not scalable

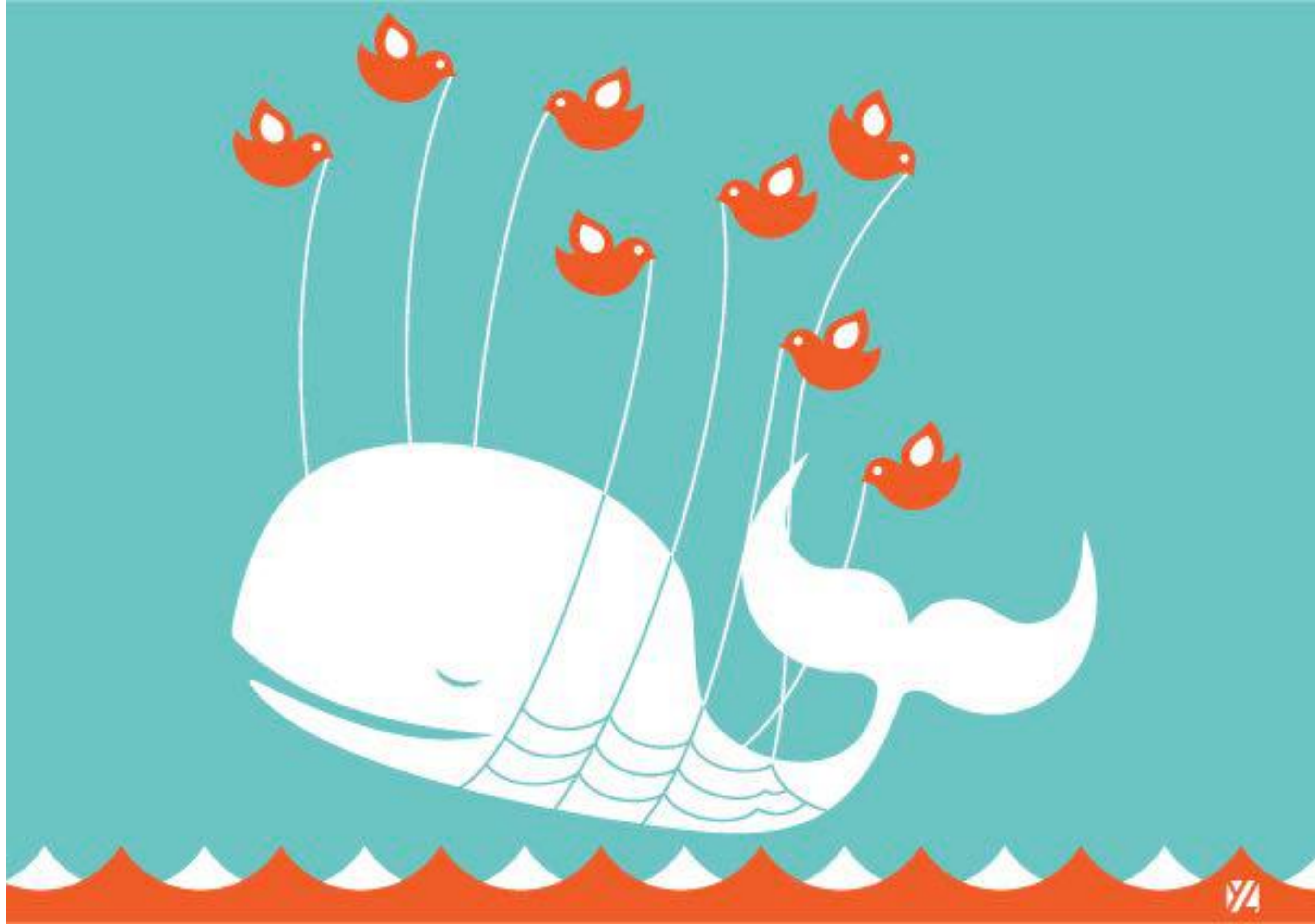
Will this solve all your
problems?

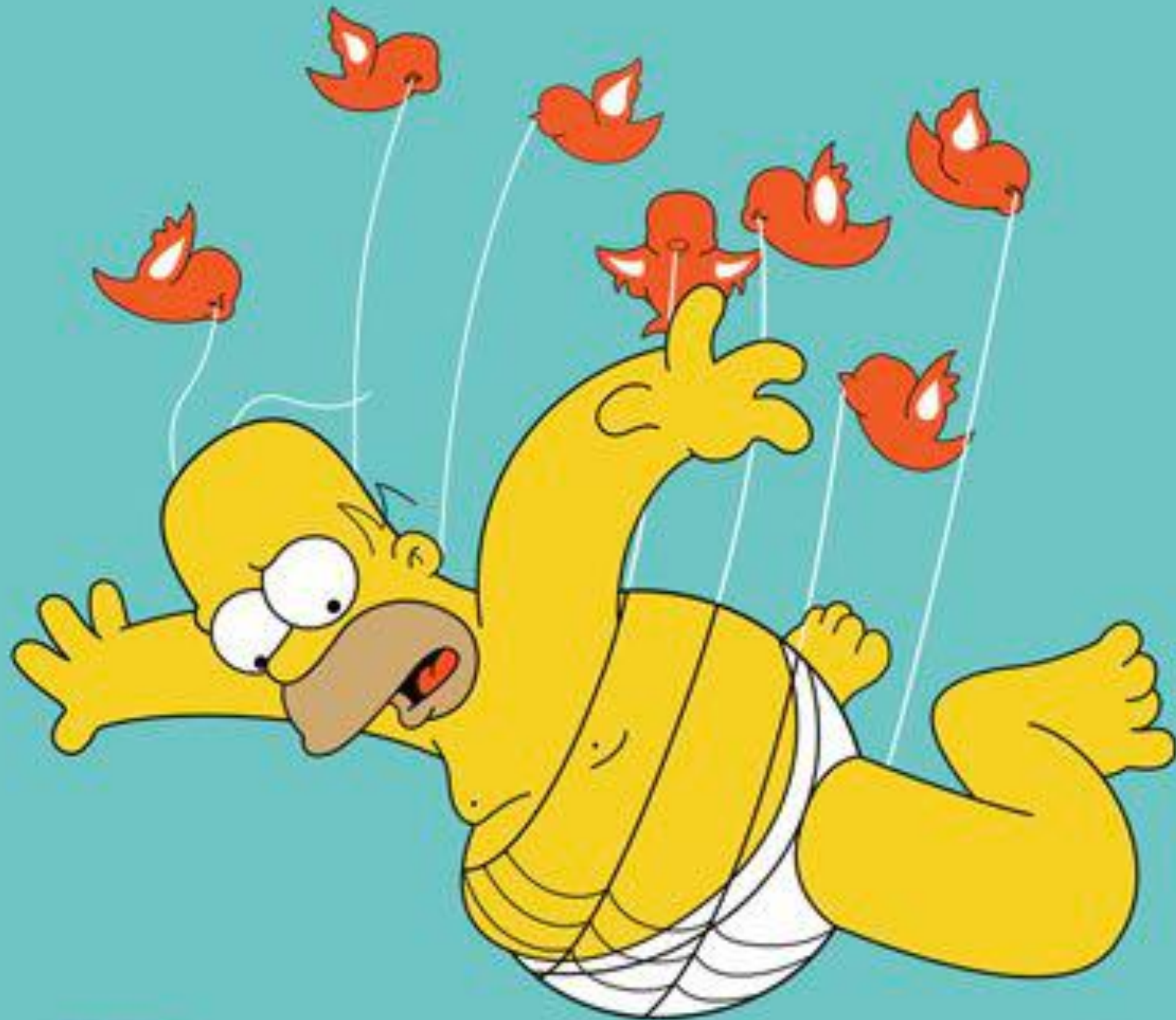


FULL DISCLOSURE: ITS NOT

Sun Microsystems

8 fallacies of
distributed computing





Jeff Hodges

Notes on Distributed Systems for Young Bloods

<https://www.somethingsimilar.com/2013/01/14/notes-on-distributed-systems-for-young-bloods/>

The Five Nines

Is it resilient? Nein.

Is it available? Nein.

Is it scalable? Nein.

Is it reliable? Nein.

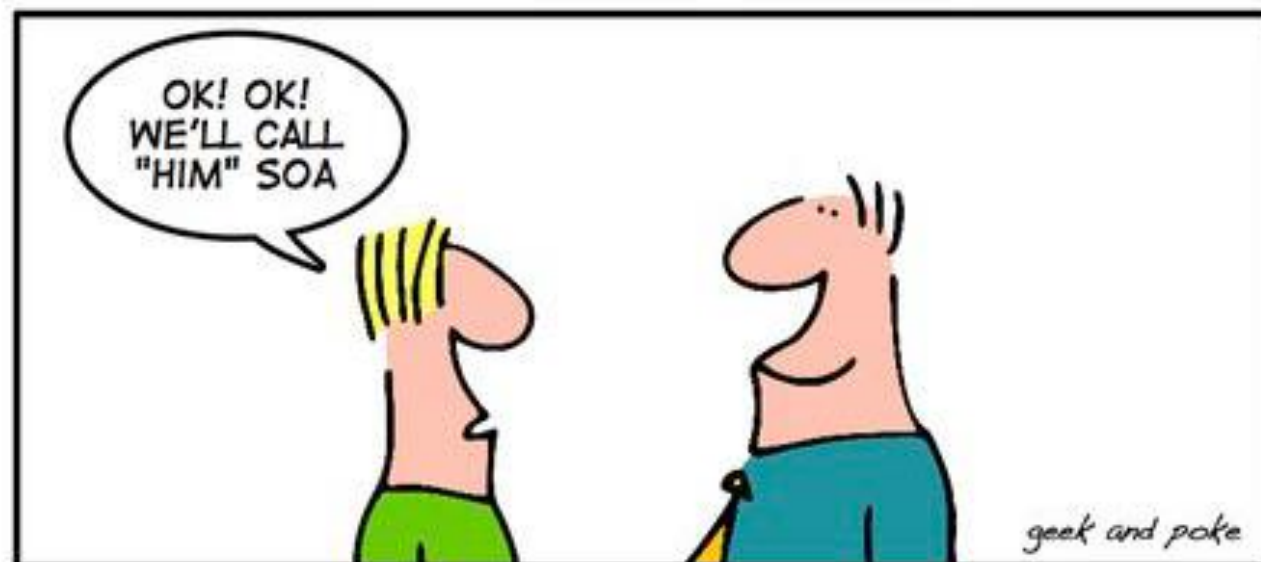
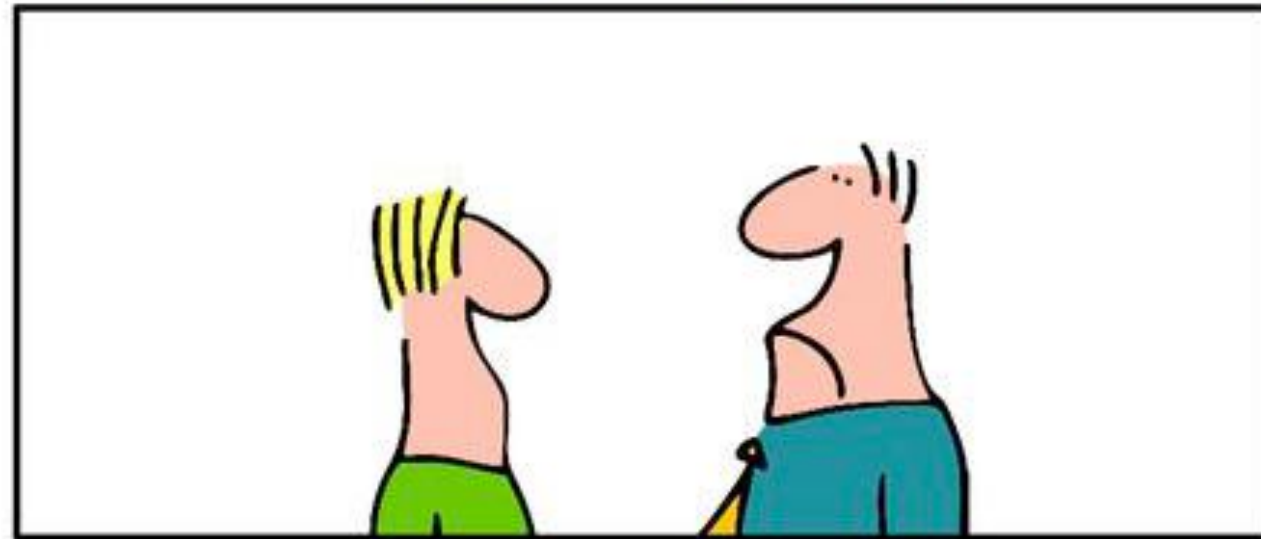
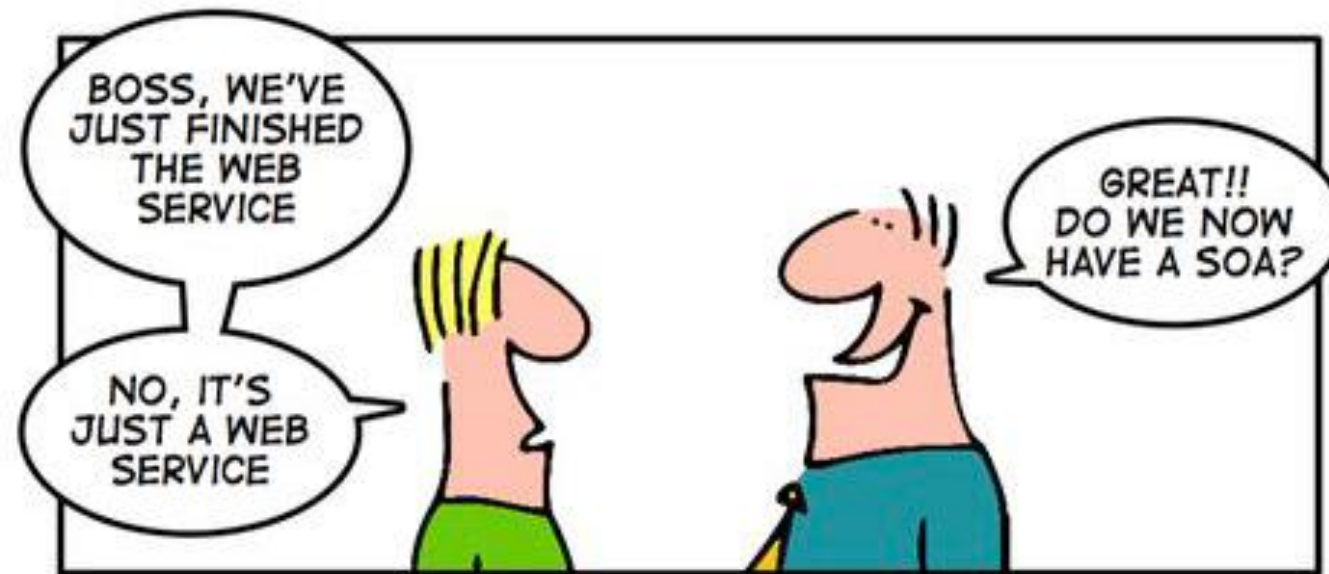
Does it work? Nein.

— <https://twitter.com/marcvolovic/status/898022815668088832>

At this point it would be easier if you told us when it DID work.

— https://twitter.com/honest_update/status/930128629677416450

SOA done right?



HOW TO GET A SOA

WVS-



SOAP: Simple Object Access Protocol.

*Except it's not Simple, it's
Complicated. And it's not about
Objects, it's about RPC.*

So really: CRAP

— <https://twitter.com/joewalnes/status/563691487586549761>

(Untitled) - Wireshark

File Edit View Go Capture Analyze Statistics Help

Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
366	11.767290	192.168.0.31	192.168.0.28	SNMP	get-response SNMPv2-SMI::enterprises.11.2.3.9.4.2.1.4.1.5.7.1
367	11.768865	192.168.0.28	192.168.0.31	SNMP	get-request SNMPv2-SMI::enterprises.11.2.3.9.4.2.1.4.1.5.8.1
369	11.775952	192.168.0.31	192.168.0.28	SNMP	get-response SNMPv2-SMI::enterprises.11.2.3.9.4.2.1.4.1.5.8.1
381	12.286091	192.168.0.28	192.168.0.1	DNS	Standard query A www.cnn.com
384	12.311862	192.168.0.1	192.168.0.28	DNS	Standard query response A 64.236.91.21 A 64.236.91.23 A 64.236.91.24
385	12.312727	192.168.0.28	64.236.91.21	TCP	56606 > http [SYN] Seq=0 win=8192 Len=0 MSS=1460 WS=2
386	12.361495	64.236.91.21	192.168.0.28	TCP	http > 56606 [SYN, ACK] Seq=0 Ack=1 win=8192 Len=0 MSS=1460
387	12.361583	192.168.0.28	64.236.91.21	TCP	56606 > http [ACK] Seq=1 Ack=1 win=17520 Len=0
388	12.361805	192.168.0.28	64.236.91.21	HTTP	GET / HTTP/1.1
389	12.413166	64.236.91.21	192.168.0.28	TCP	http > 56606 [ACK] Seq=1 Ack=845 win=6960 Len=0
390	12.413611	64.236.91.21	192.168.0.28	TCP	[TCP segment of a reassembled PDU]
391	12.414386	64.236.91.21	192.168.0.28	TCP	[TCP segment of a reassembled PDU]

Frame 384 (167 bytes on wire, 167 bytes captured)

Ethernet II, Src: Sparklan_04:d0:9e (00:0e:8e:04:d0:9e), Dst: HonHaiPr_26:66:a2 (00:1c:26:26:66:a2)

Internet Protocol, Src: 192.168.0.1 (192.168.0.1), Dst: 192.168.0.28 (192.168.0.28)

User Datagram Protocol, Src Port: domain (53), Dst Port: 62872 (62872)

Domain Name System (response)

[Request In: 381]

[Time: 0.025771000 seconds]

Transaction ID: 0xc1f

Flags: 0x8180 (Standard query response, No error)

Questions: 1

Answer RRs: 6

Authority RRs: 0

Additional RRs: 0

Queries

www.cnn.com: type A, class IN

Name: www.cnn.com

Type: A (Host address)

Class: IN (0x0001)

Answers

www.cnn.com: type A, class IN, addr 64.236.91.21

0000 00 1c 26 26 66 a2 00 0e 8e 04 d0 9e 08 00 45 00 ..&&f... ..E.

0010 00 99 00 00 40 00 40 11 b8 e6 c0 a8 00 01 c0 a8@.@.

0020 00 1c 00 35 f5 98 00 85 98 5a cf 1f 81 80 00 01 ...5.... .Z.....

0030 00 06 00 00 00 00 03 77 77 77 03 63 6e 6e 03 63w ww.cnn.c

0040 6f 6d 00 00 01 00 01 c0 0c 00 01 00 01 00 00 00 om.....

0050 b7 00 04 40 ec 5b 15 c0 0c 00 01 00 01 00 00 00 ...@. [... ..

0060 b7 00 04 40 ec 5b 17 c0 0c 00 01 00 01 00 00 00 ...@. [... ..

0070 b7 00 04 40 ec 10 14 c0 0c 00 01 00 01 00 00 00 ...@.....

This is a response to the DNS query in this fr... Packets: 1273 Displayed: 909 Marked: 0 Dropped: 0 Profile: Default

We replaced our monolith with micro services so that every outage could be more like a murder mystery.

— https://twitter.com/honest_update/status/651897353889259520



*Here's a diagram of two microservices
and their shared database.*

— [https://twitter.com/mathiasverraes/status/
711168935798902785](https://twitter.com/mathiasverraes/status/711168935798902785)

*OH: "replace your shared monolithic
DB with a shared monolithic stream
store"*

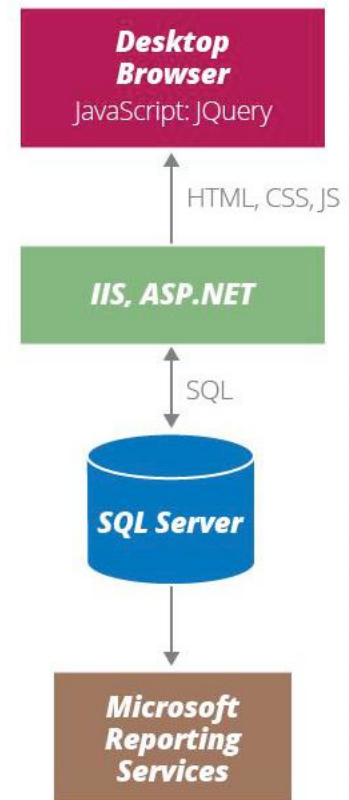
— <https://twitter.com/ntcoding/status/928902644764200960>

*...don't even consider microservices
unless you have a system that's too
complex to manage as a monolith.
The majority of software systems
should be built as a single monolithic
application.*

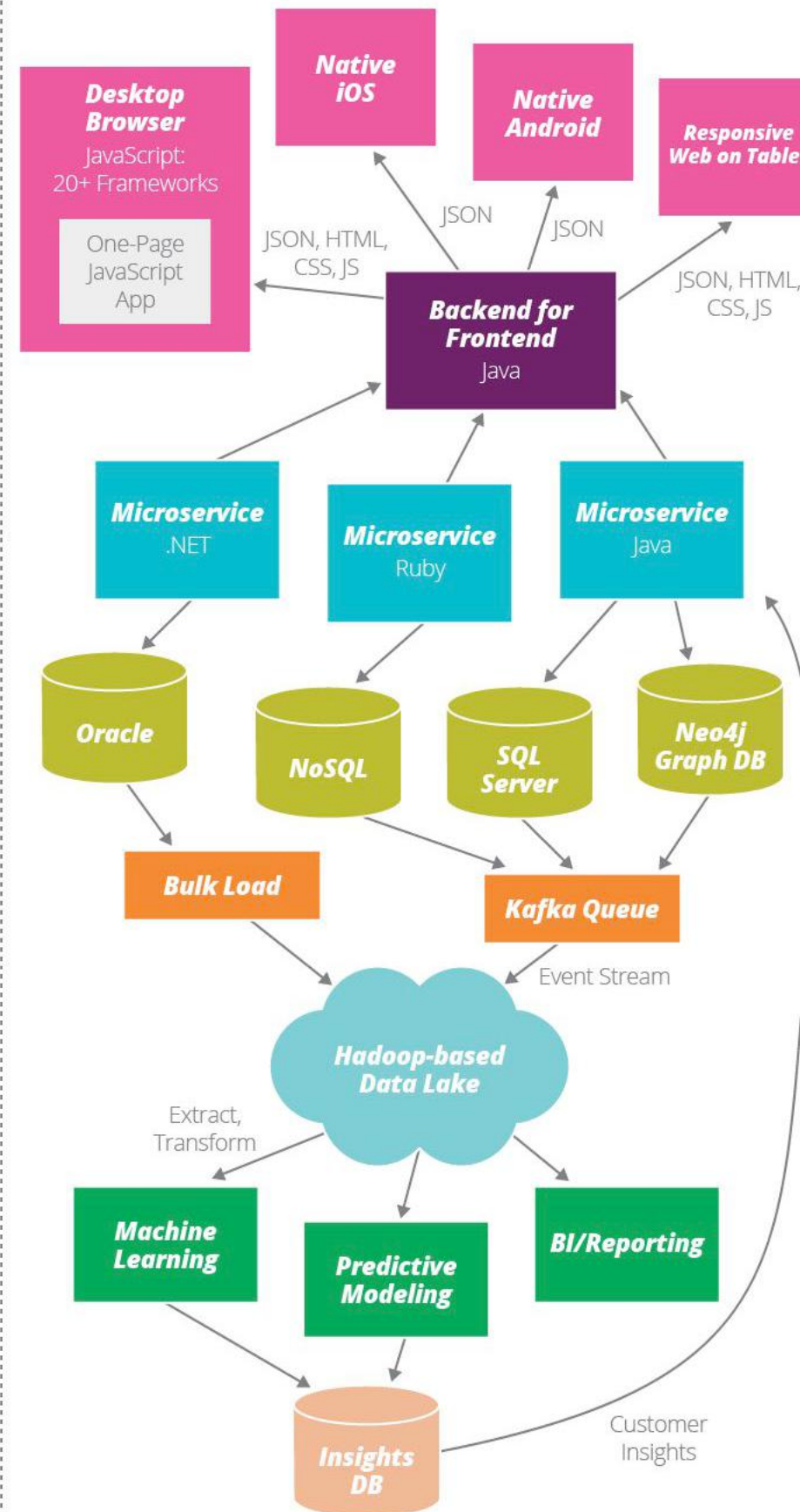
Do pay attention to good modularity within that monolith, but don't try to separate it into separate services.

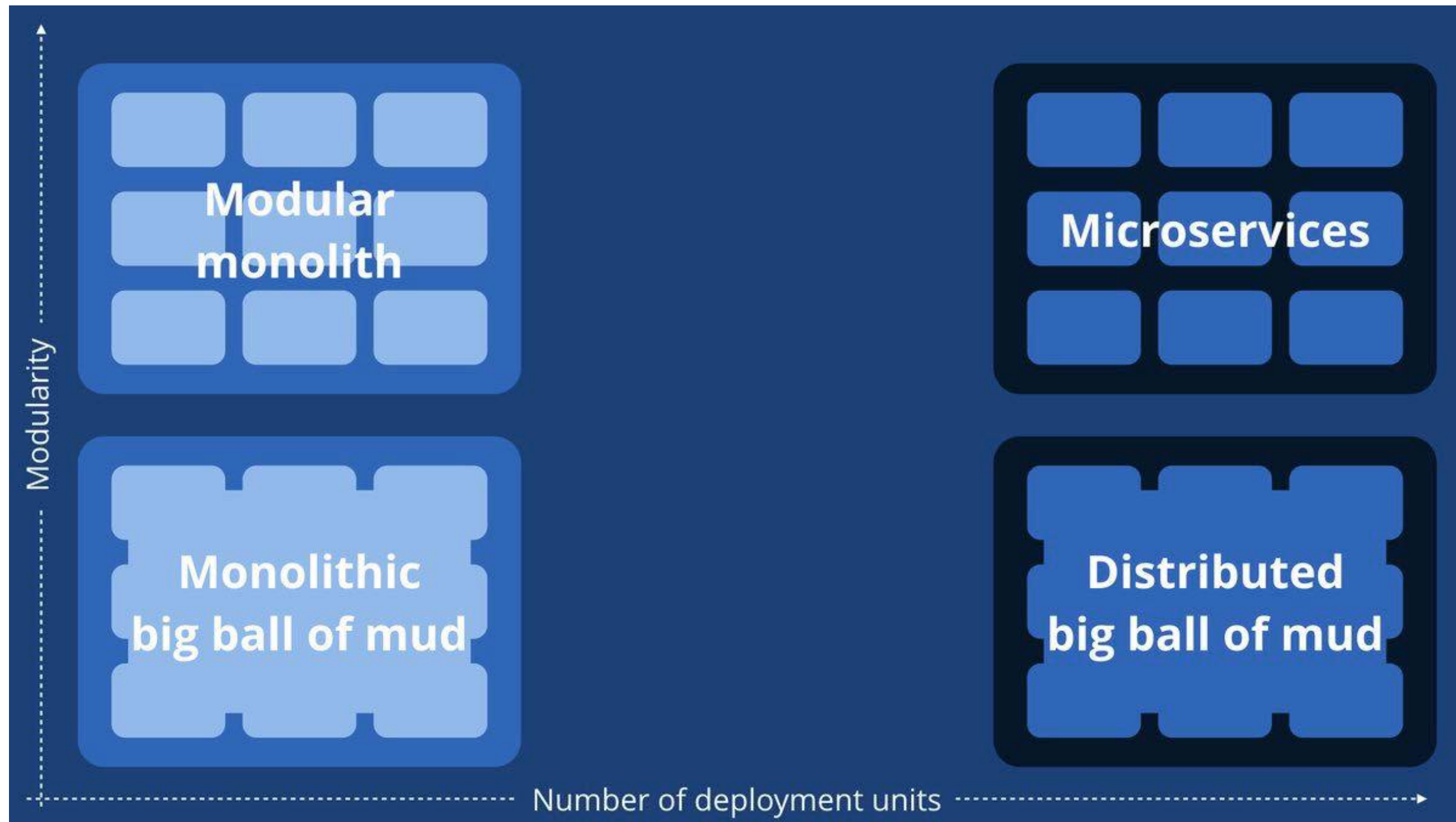
— <http://martinfowler.com/bliki/MicroservicePremium.html>

2005



2016





<https://twitter.com/simonbrown/status/847339104874381312>

*The #microservices bandwagon exists
because the name is cool. Monoliths
just need marketing help...*

*#MegaPlatform #UberContainer
#StereoLith*

— <https://twitter.com/sjmaple/status/724541627407147008>

#Serverfull

A word of the week: Microlith – a huge enterprise app ported to one, fat Docker container. #MicroserviceJokes

— <https://twitter.com/rmehmandarov/status/865542627004788737>

If you want to implement microservices, the 1st thing you need to do is implement aggregated logging. The 2nd is implement correlation IDs

— <https://twitter.com/samnewman/status/862255875125366786>

Microservices can help large number of people go faster by allowing more autonomy. I remain to be convinced it does the same for small teams

— <https://twitter.com/samnewman/status/778118760226062336>

Repeat after me

I'm not Facebook,
Google, or Amazon



Greed

is applied to a very excessive or rapacious desire and pursuit of material possessions.

The JBoss logo features the word "JBoss" in a bold, sans-serif font. The "JB" is red, and "oss" is dark grey. A registered trademark symbol (®) is at the end. To the left of the text is a decorative arrangement of nine red dots of varying sizes, forming a circular pattern.

JBoss[®]

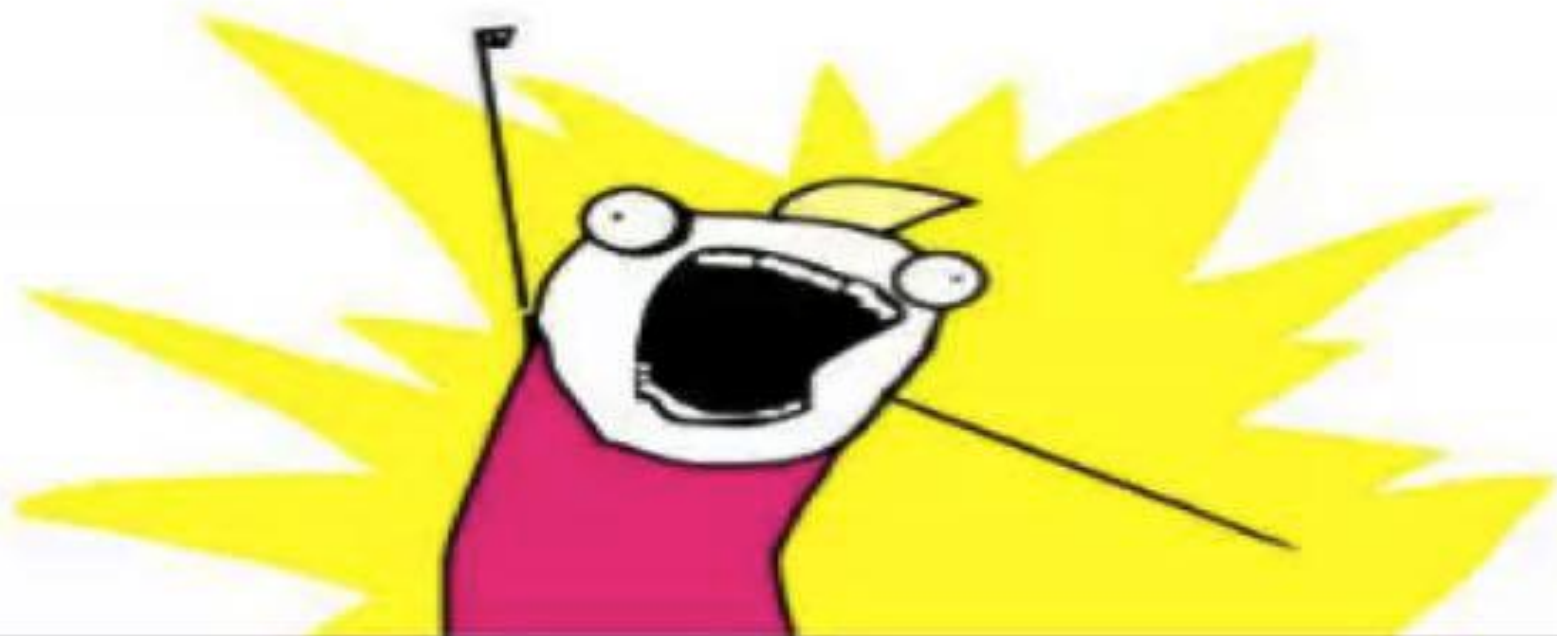
by Red Hat



Sloth

is sometimes defined as physical laziness, but spiritual laziness is emphasized.

WHAT DO WE WANT?



TO DELIVER BETTER SOFTWARE!



WHEN DO WE WANT IT?



CONTINUOUSLY!!!



Continuous
life or death cycle?

Continuous Integration **CI**

Build and test every push

Continuous Delivery


CD

Manual production deployment

Continuous Deployment **CD**

Automated production deployment






Resolved Question

continuous deployment

Show me another »

Can anyone describe an LSD trip to me?

The Hokey Pokey3 years agoReport Abuse



Best Answer - Chosen by Voters

It is an experience so weird, nobody could ever accurately describe it. Every trip is slightly different for every person and every time. Your subconscious will come to the forefront. Internal mental conflicts will be exaggerated. This is the reason some people have bad trips. But it can also be mentally therapeutic when taken in the right environment and with a focus on meditation. You will be disconnected from reality, yet everything will seem very clear.

You will feel very high. A good dose with enough visual stimulation can trigger color splashes to full blown hallucinations.

I feel that LSD should not be used as a party or pleasure drug. It should be used with respect with a focus on meditation and discovering your inner self. We can get a lot out of LSD if it is not abused.

Source(s): "I believe that if people would learn to use LSD's vision-inducing capability more wisely, under suitable conditions, in medical practice and in conjunction with meditation, then in the future this problem child could become a wonder child."

Dr. Albert Hofmann, the discoverer of LSD

experiences

environment

progress and metrics

silos

reason to brag.

your business

devops.

dev and ops collaboration

operational

first to continuously deploy units of "mind:blown."

continuous deployment

3 years agoReport Abuse

100% 1 Vote

<https://twitter.com/allspaw/status/925490726468771840>



Gonzo

Best Answer - Chosen by Voters

It is an experience so weird, nobody could ever accurately describe it. Every ~~trip~~ is slightly different for every person and every time. Your subconscious will come to the forefront. Internal mental conflicts will be exaggerated. This is the reason some people have bad ~~trips~~. But it can also be mentally therapeutic when taken in the right ~~environment~~ and with a focus on ~~meditation~~. You will be disconnected from ~~reality~~, yet everything will seem very clear.

You will feel very high. A good dose with enough visual stimulation can trigger color splashes to full blown ~~hallucinations~~.

I feel that ~~LSD~~ should not be used as a ~~party or pleasure drug~~. It should be used with respect with a focus on ~~meditation~~ and discovering your inner ~~self~~. We can get a lot out of ~~LSD~~ if it is not abused.

Source(s):

"I believe that if people would learn to use ~~LSD's~~ vision-inducing capability more wisely, under suitable conditions, in ~~medical~~ practice and in conjunction with ~~meditation~~, then in the future this problem child could become a wonder child."

Dr. Albert Hofmann, the ~~discoverer of LSD~~

first to continuously deploy units of "mind:blown."

3 years ago

[Report Abuse](#)



Facebook switched to Continuous Delivery / Deployment in 04/2017

[https://code.facebook.com/posts/270314900139291/
rapid-release-at-massive-scale/](https://code.facebook.com/posts/270314900139291/rapid-release-at-massive-scale/)

60% OF THE TIME

**DEPLOYMENTS WORK
EVERYTIME!**

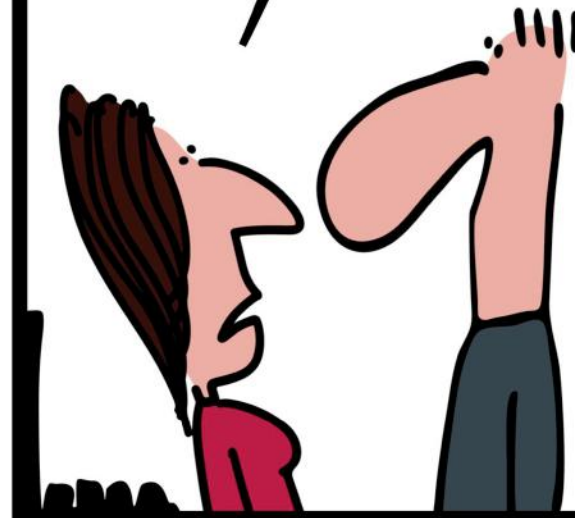
*DDD (Russian: Davai Davai Deploy) –
Just deploy this sh*t already. Come on!*

— [https://twitter.com/Steve_Jules/status/
862247438551265280](https://twitter.com/Steve_Jules/status/862247438551265280)

SIMPLY EXPLAINED

geek & poke

FOR 5 DAYS I'VE BEEN
DOING ***NOTHING*** ELSE THAN
TRYING TO DEPLOY THIS
F***ING APPLICATION ON OUR
PRODUCTION ENVIRONMENT



CONTINUOUS DEPLOYMENT



Jenkins

JERKINS = ROBOT IS FAILING ON PURPOSE

JUNKINS : ROBOT IS FAILING DUE TO
INCOMPETENCE

JANKINS : ROBOT FAILS INTERMITTENTLY FOR
NO DISCERNIBLE REASON

<https://twitter.com/ericqweinstein/status/529319496029589504>

**IF YOU COULD ALL STOP BREAKING
THE BUILD**

**THAT WOULD BE
GREAT**

Separate code and config

Do not commit secrets

HashiCorp Vault
Ansible Vault

...

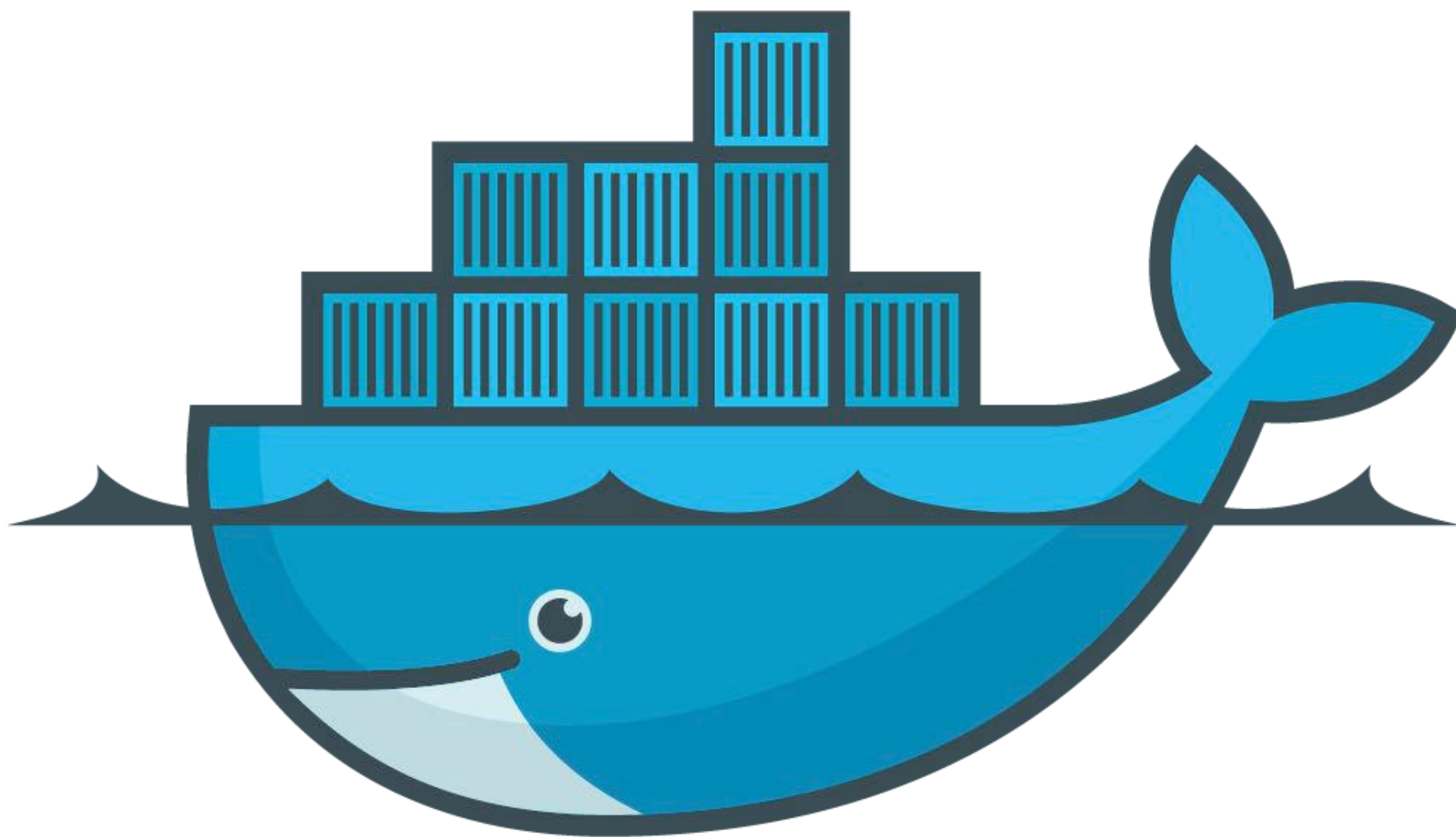


Lust

is an intense and uncontrolled desire.

Always use the hottest





docker



@sadoperator

@sadoperator

Follow



the team that releases no more than once a quarter has asked about deploying with docker



*Docker: each docker container should
just run one process*

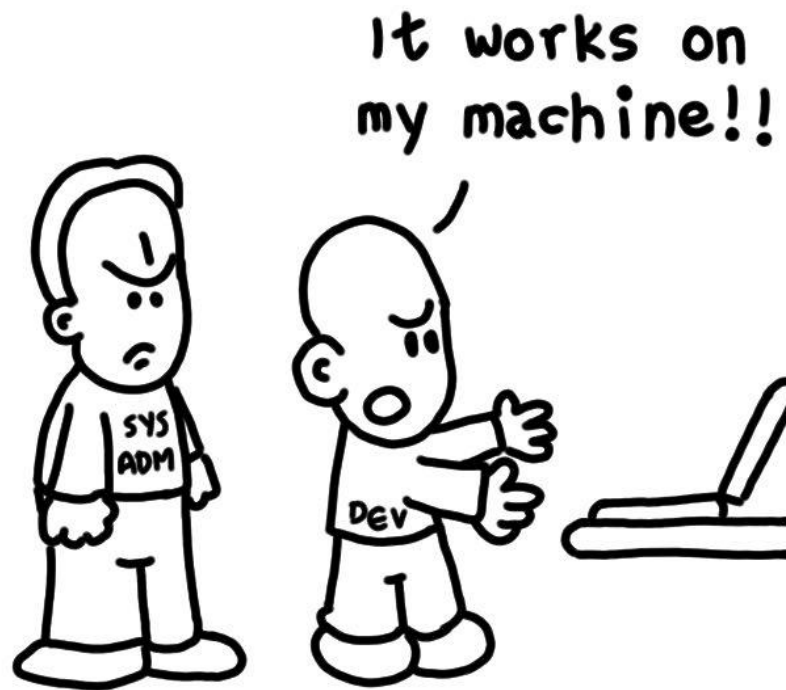
*Me: but your containers are 700+MB
each*

*Docker: you see why our mascot is a
whale*

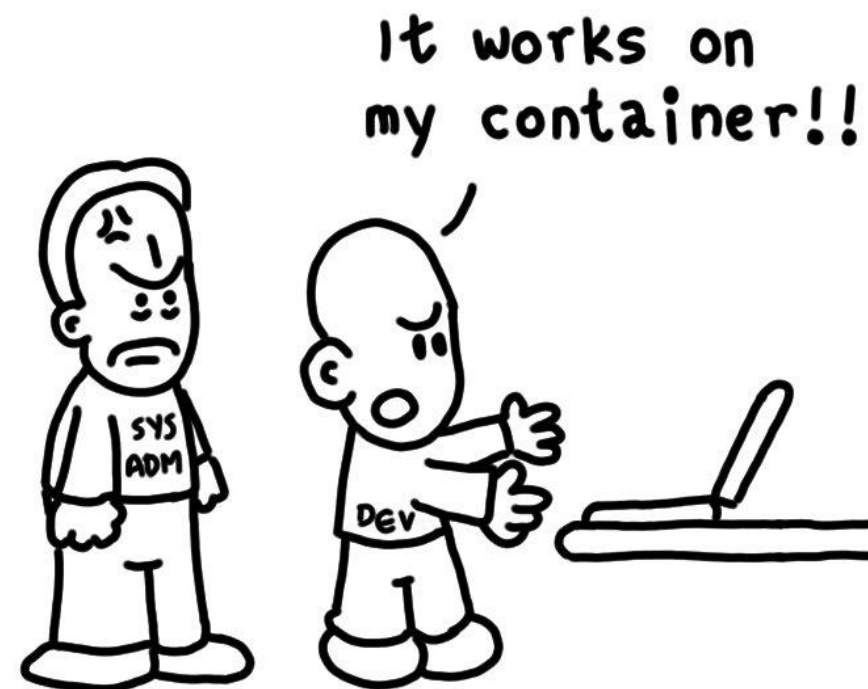
— <https://twitter.com/classam/status/743333692462895104>



Before DevOps



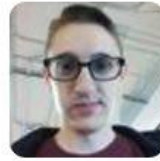
After DevOps



<https://turnoff.us/geek/before-devops-after-devops/>



Now what?



Chris Martin

@chris__martin



 Follow

It's elegant in its simplicity because it's all tires. If you understand tires, you can understand the whole system.



CONTAINERS, CONTAINERS

EVERYWHERE

"A container is just a process"



*containers will not fix your broken
architecture*

you are welcome

— <https://twitter.com/littleidea/status/659445920954642432>



so.. using Glibc?
How's re-imaging all of your
@Docker images going?

— <https://twitter.com/starbuxman/status/700591322177019904>

*You gotta love the docker-compose
command line:*

*docker-compose down -v Removes all
volumes*

*docker-compose -v down Prints the
version of docker-compose*

— <https://twitter.com/fhopf/status/971910920522760192>

New dependencies of your artifacts
JVM and base image



Containerizing legacy applications

Microservices + containers

Cargo cult

I HIRED A MANAGEMENT CONSULTANT TO TEACH US SOMETHING HE CALLS BACKWARDS CAUSATION.



Dilbert.com DilbertCartoonist@gmail.com

I STUDIED THE MOST SUCCESSFUL COMPANIES. IF YOU IMITATE THEM, YOU'LL FEEL AS IF YOU HAVE A STRATEGY.



4-11-12 ©2012 Scott Adams, Inc. /Dist. by Universal Uclick

NUMBER ONE: SPONSOR A GOLF TOURNAMENT SO YOUR CEO CAN MEET CELEBRITIES.



PROFITS, HERE WE COME.

cargo culting comes from received but not integrated knowledge. because one doesn't grasp how a thing works, one simply goes through the motion of how one was told to do it.

— <https://twitter.com/GeePawHill/status/931941663886454784>

If you are only picking Kubernetes because that's the way Google does it, then you should also consider writing your own filesystems.

— <https://twitter.com/kelseyhightower/status/741310392756887552>

Siri, mute every person who told me to use docker instead of helping me solve my actual problem, as if I didn't understand my question.

— <https://twitter.com/aphyr/status/730571211864858624>

*We've been so beaten into thinking we
need to care about the speed-of-
delivery with containers, we lost focus
somewhere on prod reliability*

— <https://twitter.com/danveloper/status/858372256174669824>

What's wrong here?

For a stateful production service

```
$ docker run -p 9200:9200  
             -p 9300:9300  
             -e "http.host=0.0.0.0"  
             -e "transport.host=0.0.0.0"  
             -e "discovery.zen.ping.unicast.hosts=..."  
             docker.elastic.co/elasticsearch/elasticsearch
```



Zombies

ideas that should have been killed by evidence, but keep
shambling along

Run Elasticsearch as
root

A large number of cockroaches, likely German cockroaches, are crawling on a piece of light-colored wood. The cockroaches are dark brown with lighter brown bands on their abdomens. They are scattered across the wood, some facing towards the camera and others away. The background is slightly blurred, showing more wood and some green foliage.

Cockroaches

claims that disappear for a while when proved wrong,
but just keep on coming back

Make JAR not WAR

One more thing
Serverless

A man with a shaved head, wearing a grey zip-up hoodie, is making peace signs with both hands. He is looking directly at the camera. The word "Serverless" is written in a large, black, serif font across the center of his chest. The background is a blurred indoor setting with some equipment and a large 'V' logo on the wall.

Serverless



Vijay Bandari

@vijaybandari

Follow



Replying to [@kelseyhightower](#)

Serverless car... you don't need to worry about engine and fuel... just sit inside and ride :)



WeirdNutDaily.com

*Yesterday I have bird and bee
discussion with junior devops for make
realize cloud instance is born of real
hardware.*

— [https://twitter.com/DEVOPS_BORAT/status/
289777231683788801](https://twitter.com/DEVOPS_BORAT/status/289777231683788801)

*I felt a great disturbance in the cloud,
as if millions of microservices suddenly
cried out in terror, and were suddenly
serverless.*

— [https://twitter.com/kennybastani/status/
858021145890762755](https://twitter.com/kennybastani/status/858021145890762755)

2016: Serverless Architecture

2017: Codeless Architecture

2018: Architectureless Architecture

— [https://twitter.com/benbjohnson/status/
746049032699600897](https://twitter.com/benbjohnson/status/746049032699600897)

*by 2025, 30% of net new technical
debt will be serverless*

— <https://twitter.com/mstine/status/972207185005633536>

PaaS reborn?

If your PaaS can efficiently start instances in 20ms that run for half a second, then call it serverless.

— <https://twitter.com/adrianco/status/736553530689998848>

PRIDE





Pride

is identified as believing that one is essentially better than others.

WORKED FINE IN DEV

**OPS PROBLEM
NOW**

DevOps is not a technology

WE DO DEVOPS ALREADY

**JUST WITHOUT AGILE,
STANDUPS, CI, CODE OR ANY OF
THAT OTHER HIPSTER STUFF**

SO YOU CREATED A DEVOPS TEAM



TO SOLVE YOUR SILO PROBLEMS

To make error is human. To propagate error to all server in automatic way is #devops.

— https://twitter.com/DEVOPS_BORAT/status/41587168870797312



Envy

is the discontent towards someone's traits, status, abilities, or rewards.

Craft everything yourself!

Example: Java

<https://start.spring.io>

*"Nobody uses Maven. Maven uses
you" @venkat_s at #DevOxx*

— [https://twitter.com/mariofusco/status/
927899858056425472](https://twitter.com/mariofusco/status/927899858056425472)

Infrastructure Pets vs Cattle

*All my servers are cattle ... except for
the redis instance. That one gets
health care and Christmas gifts.*

— <https://twitter.com/ajordens/status/801847570259509248>

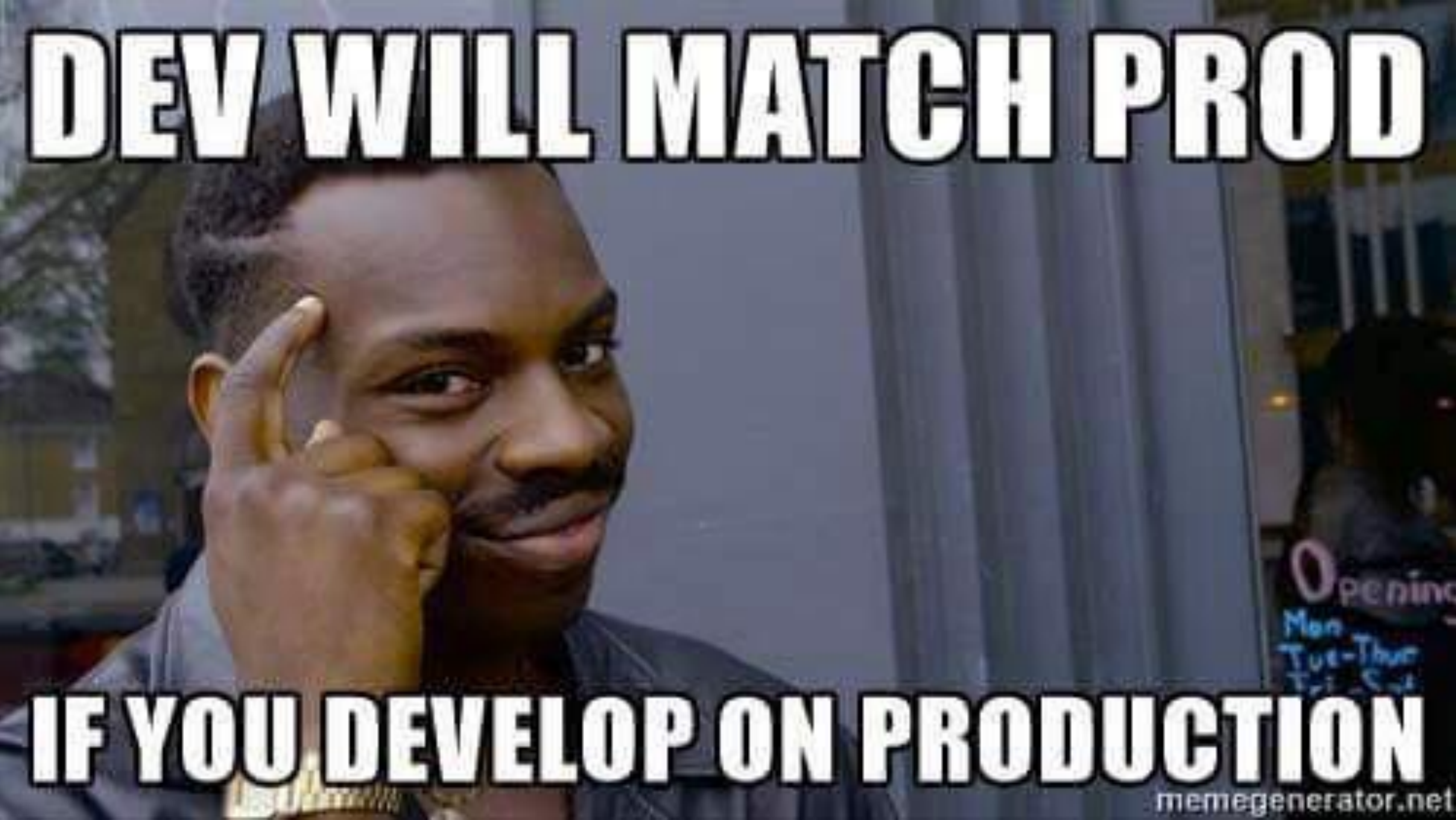
Ansible
Puppet
Chef

Terraform

AUTOMATE



Avoid Drift



DEV WILL MATCH PROD

IF YOU DEVELOP ON PRODUCTION

I like the "ssh tags the instance for garbage collection" model as a step; it lets you migrate a team to new habits.

— <https://twitter.com/ferlatte/status/905984786082050048>



Wrath

also known as "rage", may be described as inordinate and uncontrolled feelings of hatred and anger.

Log & Monitor

**I DON'T ALWAYS MONITOR MY
NETWORK**

BUT I SHOULD

memegenerator.net

Apache - Total Visitors

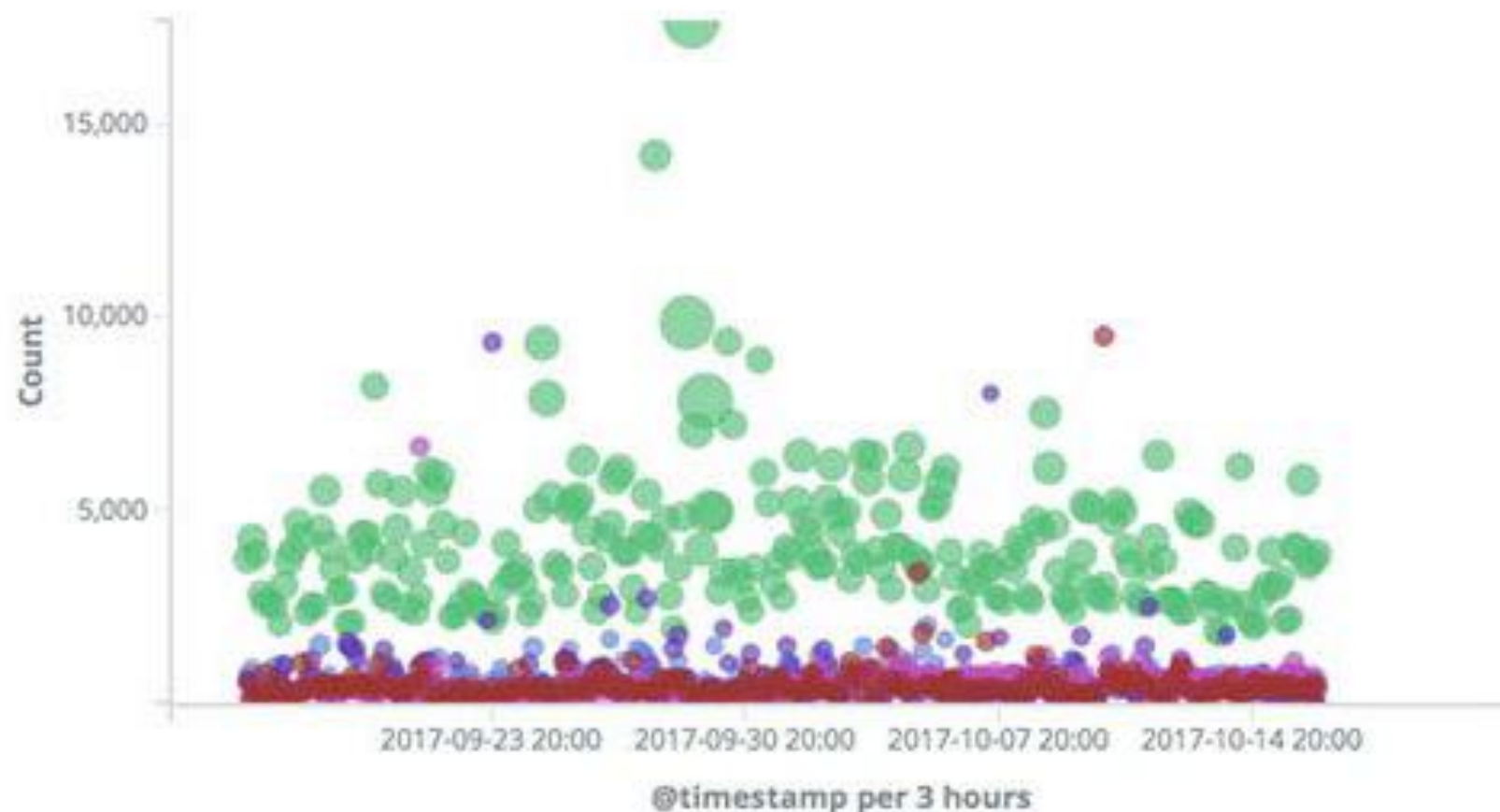
2,317,838

Apache - Unique Visitors

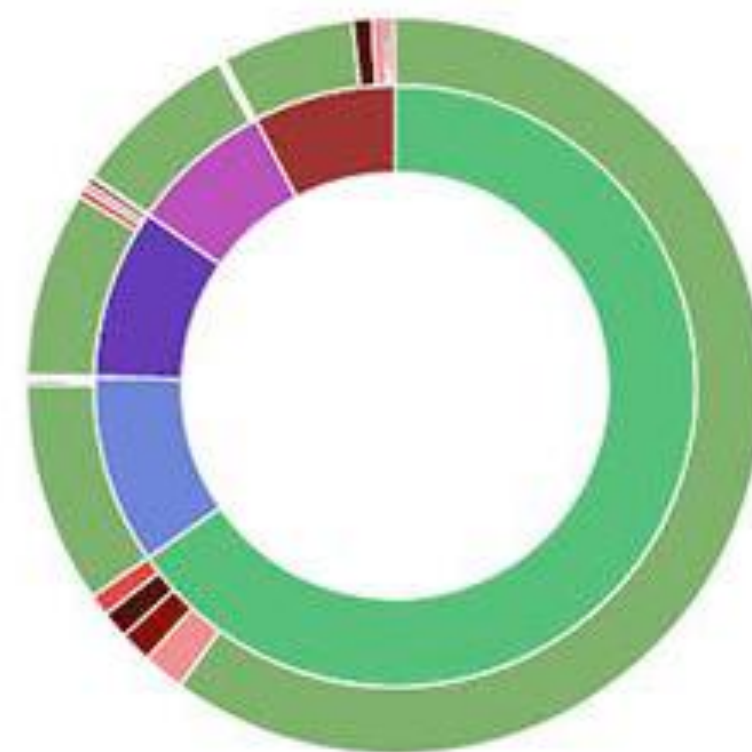
29,740

Apache - Bytes and Count

US FR DE NL CN



Apache - Country and Status

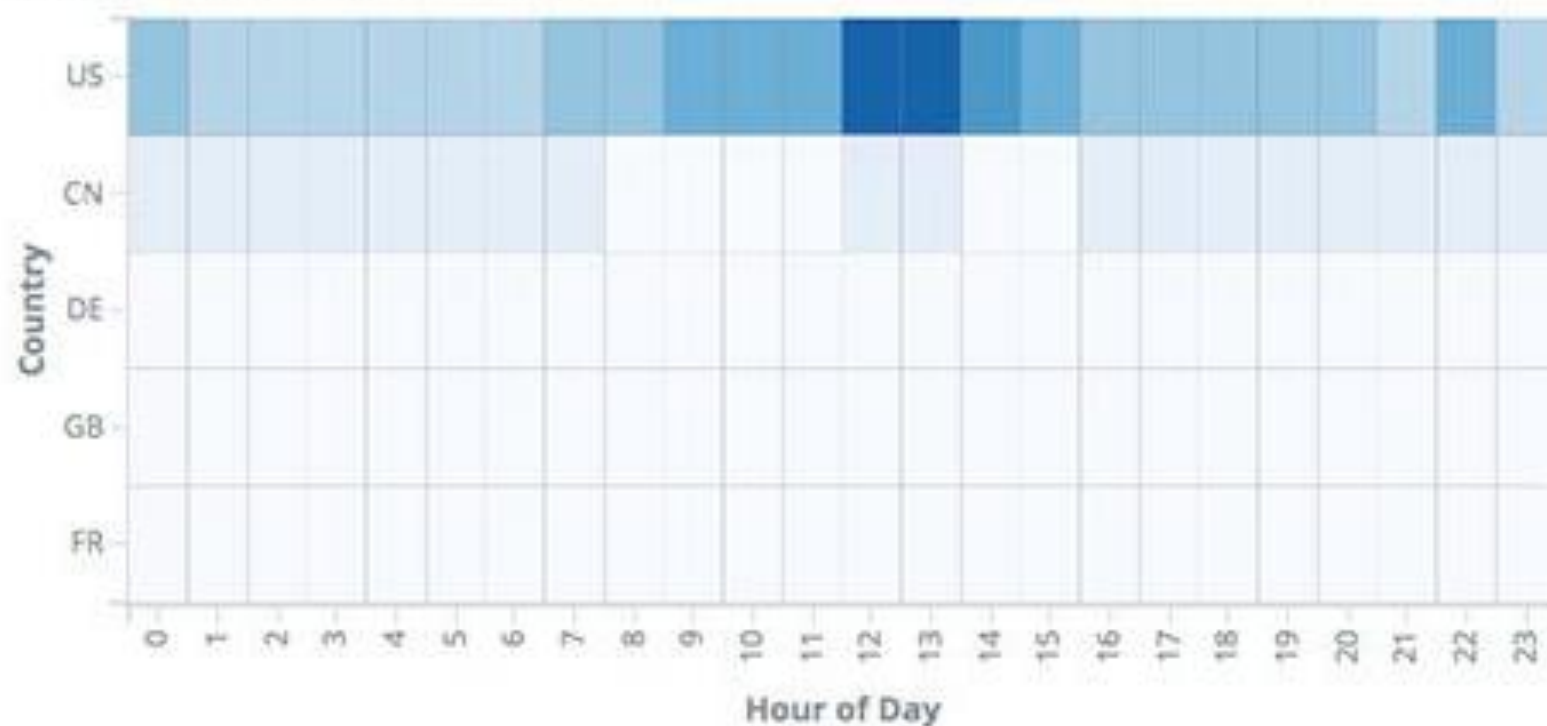


Apache - Unique Visitor...

Apache - Country traffic by hour

Apache - Top OS small

City	Count of Unique Clients
Beijing	569
Ashburn	397
Redmond	383
Chicago	379
London	248
Los Angeles	232



Conclusion

*A good developer is like a werewolf:
Afraid of silver bullets.*

— [https://twitter.com/codepitbull/status/
784691906005635072](https://twitter.com/codepitbull/status/784691906005635072)

*OH: “their infra is 50 shades of broken
and they’re now setting up their own
frankenetes cluster hoping it’ll fix
everything”* 😱😞

— [https://twitter.com/copyconstruct/status/
935317466573504512](https://twitter.com/copyconstruct/status/935317466573504512)

1. ~~Gluttony~~

2. ~~Greed~~

3. ~~Sloth~~

4. Envy

5. Wrath

6. Pride

7. Lust

8-BIT CINEMA



SE7EN

<https://youtu.be/zoGyuiyCUAQ>

Questions?
Confessions?

@xeraa